

## ABSTRACT OF THE DISCLOSURE

A copper coil used to induce plasma in spectroscopy and other associated fields is electroplated with nickel, platinum, palladium, rhodium, ruthenium, or other  
5 appropriate metal to act as a barrier to the migration of copper atoms. This barrier layer is further electroplated with a layer of gold, platinum, palladium, rhodium, or ruthenium. This second layer is added to provide resistance to oxidation of the barrier layer and of the copper coil.